

**ABSTRACT:**

This invention uses the “row/column buffer switches” to make it possible that LCD display can scan either vertically or horizontally. This invention solved the limitation of the traditional LCD can only scan in one direction (horizontal) issue. That makes LCD will be able to accept either the landscape or the portrait images without a pre-rotate process. With the easy implementation, buffer switches can be applied to both of the two standards, STN (known as passive matrix addressing) and TFT (known as active matrix addressing) LCD devices.